IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A separator for high power lithium batteries comprising a sheetlike flexible substrate having a multiplicity of openings and having a porous inorganic electrically insulating coating on and in said substrate, said coating closing the openings in the substrate, the material of said substrate being selected from non-woven electrically nonconductive polymeric fibers and said inorganic electrically insulating coating comprising particles, wherein the separator is an electrical insulator and has lithium ion conducting properties without the presence of an electrolyte and wherein the separator comprises at least one lithium ion conducting inorganic material which may also contain organic groups ~~and which has lithium ion conducting properties~~ and which lithium ion conducting inorganic material is chemically bonded to the inorganic coating.

Claim 2 (Original): The separator of claim 1, wherein the particles of the inorganic electrically insulating coating comprise particles of oxides of the elements Al, Zr and/or Si.

Claim 3 (Currently Amended): The separator of claim 1, wherein the at least one lithium ion conducting inorganic material ~~which may also contain organic groups and which has lithium ion conducting properties~~ is present as an admixture in the structure of the separator in addition to said coating.

Claim 4 (Currently Amended): The separator of claim 1, wherein said particles are coated with said at least one lithium ion conducting inorganic material which may also contain organic groups ~~at least part of the material forming the inorganic porous coating has lithium ion conducting properties~~.

Claim 5 (Previously Presented): The separator of claim 1, comprising as inorganic lithium ion conducting materials at least one compound from the group consisting of the lithium phosphate zirconate glasses, α- and/or γ-lithium zirconium phosphates, lithium sulfonates, lithium phosphonates which are attached to α- and/or γ-zirconium phosphonates, and a mixture of these compounds.

Claim 6 (Currently Amended): The separator of claim 1, wherein the inner and/or outer surfaces of the ~~oxide~~ particles present in the separator are coated with a layer of a lithium ion conducting inorganic material which may also contain organic groups.

Claim 7 (Original): The separator of claim 6, wherein the layer has a thickness of from 10 to 100 nm.

Claim 8 (Previously Presented): The separator of claim 1, which comprises a lithium ion conducting material comprising negative-charge-carrying matrix constituents and lithium cations.

Claim 9 (Previously Presented): The separator of claim 1, wherein the lithium ion conducting material contains ionic groups selected from the group consisting of sulfonates, phosphonates, carbonates, sulfonylamides and mixtures of these groups.

Claim 10 (Original): The separator of claim 9, wherein the ionic groups are bonded chemically to the inorganic particles via organic groups or spacers.

Claim 11 (Original): The separator of claim 10, wherein the ionic groups are attached directly or indirectly via the organic groups or spacers, via Si-O- or Zr-O- groups to the inorganic particles.

Claim 12 (Original): The separator of claim 11, wherein said organic groups or spacers are fluorinated or nonfluorinated aryl and/or alkyl chains and/or polyether chains and the ionic groups are thereby connected to the inner and/or outer surface of the particles present in the separator.

Claim 13 (Previously Presented): The separator of claim 1, wherein the ion conducting separator is bendable down to a smallest radius of 0.5 mm.

Claim 14 (Previously Presented): A process for producing a separator having lithium ion conducting properties as claimed in claim 1, comprising making a sheetlike flexible substrate having a multiplicity of openings and having a porous inorganic electrically insulating coating on and in said substrate, the material of said substrate being selected from non-woven electrically non-conductive polymeric fibers, which comprises a sheetlike flexible substrate having a multiplicity of openings being provided with a coating on and in said substrate the material of said substrate being selected from non-woven electrically nonconductive polymeric fibres and said coating being a porous electroinsulating ceramic coating and using a compound having lithium ion conducting properties to produce the separator.

Claim 15 (Original): The process of claim 14, wherein the separator having lithium ion conducting properties is obtained by treating a separator which does not have lithium ion

conducting properties with at least one ion conducting material or with at least one material which following a further treatment has ion conducting properties.

Claim 16 (Previously Presented): The process of claim 14, wherein for the treatment with a lithium ion conducting material the material used to produce the lithium ion conducting separator is a material which carries negative fixed charges and lithium cations as counterion, the material carrying negative fixed charges being selected from compounds which attach to the surface of the inorganic coating via a phosphonyl or siloxane group.

Claim 17 (Previously Presented): The process of claim 14, wherein the treatment of the separator with at least one lithium ion conducting material or at least one material which following a further treatment has lithium ion conducting properties takes place by impregnating, dipping, spreadcoating, rollercoating, knife coating, spraying or other coating techniques.

Claim 18 (Previously Presented): The process of claim 14, wherein the separator following treatment with at least one lithium ion conducting material or with at least one material which following a further treatment has lithium ion conducting properties is thermally treated.

Claim 19 (Original): The process of claim 18, wherein the thermal treatment is conducted at a temperature of from 50 to 280°C.

Claim 20 (Previously Presented): The process of claim 14, wherein the material used to produce the inorganic porous coating is a material which has lithium ion conducting properties.

Claim 21 (Previously Presented): The process of claim 20, wherein the material used to produce the inorganic porous coating is a material selected from the group consisting of lithium phosphate zirconate glasses, α- and/or γ-lithium zirconium phosphates, zirconium phosphates doped with lithium sulfonates , zirconium phosphates doped with immobilized lithium sulfonates and mixtures thereof.

Claim 22 (Previously Presented): A lithium battery comprising a separator as claimed in claim 1.

Claim 23 (Previously Presented): A lithium battery as claimed in claim 22, wherein the separator is impregnated with an electrolyte.

Claim 24 (Previously Presented): A lithium battery as claimed in claim 23, wherein a solution of $LiPF_6$, $LiBF_4$, $LiC1O_4$, $LiAsF_6$, $LiCF_3SO_3$, $LiClO_4$, lithium bisoxalatoborate (Libob) and/or lithium bis(trifluorormethylsulfonyl)amide (BTA, $LiN(SO_2CF_3)_2$) in ethylene carbonate (EC), dimethyl carbonate (DC), propylene carbonate (PC), methyl propyl carbonate (PMC), butylene carbonate (BC), diethyl carbonate (DEC), γ-butyrolactone (γ-BL), $SOCl_2$ and/or SO_2 is used as electrolyte.

Claim 25 (Previously Presented): A battery which comprises a separator as claimed in claim 1.